

REMARKS

Reconsideration of this application in light of the present amendment and response is respectfully requested.

Claims 1- 9 have been rejected.

Claim 10 was previously canceled.

Claim 9 has been canceled, without prejudice

Claim 1, 3, 5 and 7 have been amended.

Claims 1-8 are pending in this application.

35 U.S.C. §101

Claims 1-9 have been rejected under 35 U.S.C. §101 as not falling within one of the four statutory categories of invention. This rejection is respectfully traversed.

Claim 1 has been amended to incorporate claim 9 so as to fall into a statutory category of invention, by being tied to a particular apparatus, by including the step of applying the operational parameters in the operation of the communication network, further support for which can be found on page 22 lines 7-13.

For the foregoing reasons, applicants respectfully request that the above rejection be withdrawn.

35 U.S.C. §103(a)

Claims 1-10 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Pareto-based cost simulated annealing for multiobjective optimization to Nam et al. (hereinafter “Nam”) in view of admitted of the instant application (hereinafter admitted prior art) and further view of Vlach et al. (US Patent Number 5,548,539, hereinafter “Vlach”).

Independent claim 1 has been amended to better specify the relationship with the term “objectives”. Further support for which can be found in the text on page 21 line 29 to page 22 line 8, and claim 9. Claim 1 recites that a multiple objective simulated annealing (MOSA) process employs a dominance-based energy function. The Examiner cites Vlach (col. 32 lines 18-21) as describing operation within boundaries of a curve where segments of the curve correspond to maximum power dissipation, and the Examiner goes on to equate maximum power to applicants’ dominance-based energy function.

Applicant’s respectfully disagree with the interpretation of maximum power dissipation being the same as a dominance-based energy function. Firstly, power is not the same as energy.

Power is energy divided by time. Vlach does not mention time. Without the time element, power can not be defined as energy. Secondly, applicant submits that the Examiner has taken maximum power out of context. Vlach does not mention maximum power but instead mentions maximum power dissipation, which is different. Thirdly, the term maximum is not the same as dominance-based. Dominance does not imply a maximum. Fourthly, the dominance-based energy function used by applicant (see claims 2 and 3) is nowhere taught or even envisioned by Vlach. For the above reasons, applicant respectfully submit that Vlach does not describe a dominance-based energy function, and therefore the combination of cited art could not have described a MOSA process that employs a dominance-based energy function to select operational parameters.

Accordingly, applicant respectfully that amended claim 1 is patentable and non-obvious over the cited art, and should be allowed.

Claims 2 and 5 have been amended for clarity, support for which can be found in the text on page 13 line 17 to page 14 line 12 (and Eq. 11).

Applicant respectfully disagrees that Nam (col. 3 lines 23-36) can describe the dominance-based energy function by a simple substitution of $E(x)$ for $F(x)$. Claim 2 has already defined $F(x)$, which is different than $E(x)$. Nam makes no mention of the element μ which distinguishes $E(x)$ from $F(x)$ in claim 2. Therefore, Nam does not describe the elements of claim 2.

Claim 3 has also been amended to reference claim 2 where all the terms are already defined. Nam does disclose a dominance-based function $F(x)$, which applicant has already explained, above with respect to claim 2, is different than applicant's dominance-based *energy* function $E(x)$. Vlach describes a maximum and minimum function that is determined from a sum of squares, but does not describe a difference function or an energy function. Claim 3 describes maximum, energy, and difference function, but not a sum, square, square root, or minimum function. Therefore, neither Nam nor Vlach, in combination or alone describe the many elements of the particular equation used in claim 3.

In claim 5, applicant respectfully disagrees that Vlach (col. 6 lines 21-33 and col. 4 lines 13-15 and Fig. 18 and 8) describe transversal or location scaling. In fact, Vlach makes no mention of scaling at all. Applicant requests the Examiner to point out exactly where "scaling" is performed in either Nam or Vlach.

Claim 7 has been amended for clarity, support for which can be found on page 21 lines 29-33.

Moreover, claims 2-8 are dependent on amended claim 1, hereby incorporated by reference, and are therefore deemed allowable as well for the same reasons.

Applicant respectfully requests that this rejection be withdrawn.

The other references of record have been reviewed and applicant's invention is deemed patentably distinct and nonobvious over each taken alone or in combination.

For the foregoing reasons, applicants respectfully request that the above rejections be withdrawn.

Inasmuch as this amendment distinguishes all of the applicants' claims over the prior art references, for the many reasons indicated above, passing of this case is now believed to be in order. A Notice of Allowance is earnestly solicited.

No amendment made was related to the statutory requirements of patentability unless expressly stated herein. No amendment made was for the purpose of narrowing the scope of any claim, unless applicant has argued herein that such amendment was made to distinguish over a particular reference or combination of references.

Authorization is hereby given to charge any fees necessitated by actions taken herein to Deposit Account 50-2117.

Respectfully submitted,
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